

ABSTRACT

A duty cycle management system and method for use in a wireless device

5 having a transmitter which transmits packets in the form of individual packets and/or packet bursts comprising a predetermined maximum number of contiguous packets. The transmitter has an associated predetermined duty cycle limit for transmission of packets and is operable over a duration measurable as a series of time windows each of which comprises a predetermined number of timeslots with each timeslot having a

10 predetermined nominal duration. Transmission of one packet occupies one timeslot. A controller in combination with an instruction set limits the number of packets transmitted during each time period defined by one time window or adjacent time windows, on a sliding basis, so as to limit the duty cycle of transmissions during successive adjacent time windows to the predetermined duty cycle limit. To do so transmission of packets is

15 delayed as needed to establish sufficient idle period(s) during the one or adjacent time window(s) to maintain the duty cycle within the duty cycle limit. An identification is made prior to the transmission of a packet whether an individual packet or a packet burst transmission mode is to be applied. A counter is used in the preferred embodiment for keeping a running count which correlates to the duty cycle over the

20 period of a time window. The counter is incremented by an amount IC for each timeslot in which a packet is transmitted and is decremented by an amount DC for each idle timeslot, whereby the ratio of IC to DC is the duty cycle limit. Where a maximum count amount, equal to the predetermined number of timeslots per time window, would be exceeded packet transmission is inhibited.